Estimate Lengths

Check Understanding

Estimate the length of a pair of scissors in inches. Tell how you made your estimate.

What You Need

- number cube
- 9 game markers in one color
- 9 game markers in a different color
- Game Board

What You Do

1. Take turns. Roll the number cube. Read the measurement next to that toss in the table.
2. Find an item on the **Game Board** that has that estimated length.
3. Your partner checks the answer. If you are correct, place a game marker on that box on the **Game Board.** If you are not correct, your turn ends. If there are no more items left for that length, your turn ends.
4. The first player to get three boxes in a row wins.
5. Play again!

Toss	Number
1	2 centimeters
2	6 inches
3	1 meter
4	7 feet
5	50 meters
6	Your turn ends.

Go Further!

Choose three items on the **Game Board.** Estimate the length using a different unit.

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Partner A _____

Partner B _____

Estimate Lengths

length of a stamp	**height of a tall tree**	**how far across a nickel is**
height of a door	**length of a carrot**	**length of a baseball bat**
length of a guitar	**length of a dollar bill**	**length of a swimming race**

I can think about how the size of the item compares to something I already know.

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Estimated and Actual Lengths

What You Need

- 5 classroom objects (such as a paper clip, crayon, marker, glue stick, book, piece of paper, folder, or cube train of 5 connecting cubes)
- ruler with both centimeters and inches
- Recording Sheet

Check Understanding

Estimate the length of the top of your desk in feet. Use a ruler to measure it. How does your estimate compare to the actual length? Explain.

What You Do

1. Work together. Choose an object.
2. Write the name of the object in the first column on the **Recording Sheet.**
3. Estimate the length of the object in centimeters. Write your estimate in the second column. Tell how you made your estimate.
4. Measure the length of the object in centimeters and record it in the third column. Your partner checks the measurement.
5. Estimate, then measure the object in inches. Record in columns 4 and 5.
6. Repeat until both partners have had two turns.

Example

Choose a crayon.

Estimate its length in centimeters: **10 centimeters**

Then measure its length in centimeters: **9 centimeters**

Estimate its length in inches: **3 inches**

Then measure its length in inches: **about 3 inches**

Go Further!

Find the longest object in the chart on the **Recording Sheet.** Estimate its length in feet.

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Partner A _____

Partner B _____

Estimated and Actual Lengths

Name of Object	Estimate (in centimeters)	Actual (in centimeters)	Estimate (in inches)	Actual (in inches)

I know that a centimeter is about the same distance across as my little finger. I know that a quarter is about an inch across.

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Compare Centimeter Lengths

What You Need

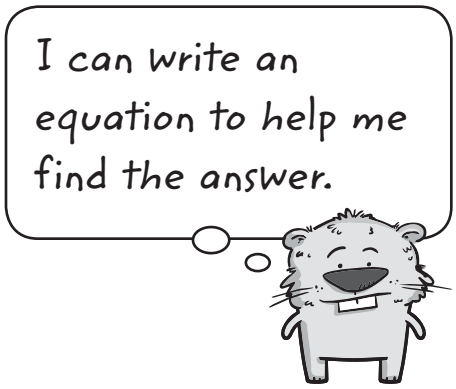
- centimeter ruler
- Recording Sheet

Check Understanding

Measure the length of your pencil in centimeters and compare it to the length of your partner's pencil. Which is longer? How much longer is it?

What You Do

1. Take turns. Choose a box on the **Recording Sheet.** Read the sentences.
2. Find the lines you need to measure. Use a ruler to measure the length of each line in centimeters. Record the measurements in the box.
3. Your partner compares the lengths and completes the last sentence in the box. Check the work.
4. Continue until all the boxes are completed.



Go Further!

Measure a crayon and a pencil in centimeters. Write an equation to compare the lengths of the objects. Tell your partner how much longer one object is than another.

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Partner A _____

Partner B _____

Compare Centimeter Lengths

Measure and Compare the Lines

A _____

B _____

C _____

D _____

A is _____ cm long. B is _____ cm long. _____ is _____ cm longer than _____.	B is _____ cm long. C is _____ cm long. _____ is _____ cm longer than _____.	C is _____ cm long. D is _____ cm long. _____ is _____ cm longer than _____.
A is _____ cm long. C is _____ cm long. _____ is _____ cm longer than _____.	A is _____ cm long. D is _____ cm long. _____ is _____ cm longer than _____.	B is _____ cm long. D is _____ cm long. _____ is _____ cm longer than _____.

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Compare Lengths

What You Need

- 20 connecting cubes
- inch ruler
- centimeter ruler
- Recording Sheet

Check Understanding

Measure the height of a desk leg and the height of a chair leg in inches. Find the difference.

What You Do

1. Take turns. Choose a box on the **Recording Sheet.**
2. Use the connecting cubes to make two trains of different lengths.
3. Measure the length of the trains in centimeters.
4. Complete the bar model on the **Recording Sheet** to find the difference in the length of the trains. Then complete an equation to show the difference.
5. Your partner checks the answer and writes the difference.
6. Repeat until both partners have had three turns.

Example

Make two trains of connecting cubes.

Measure the length of the first train: **10 cm**

Measure the length of the second train: **6 cm**

Find the difference in the lengths by making a bar model and writing an equation.

10	
6	?

10 − 6 = 4

Difference: **4** cm

Go Further!

Make two more trains of connecting cubes. Measure both trains in inches. On a separate sheet of paper, write an equation to find the difference.

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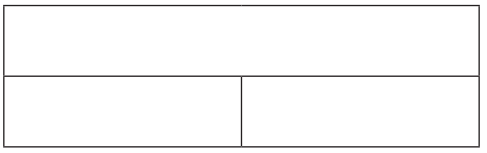
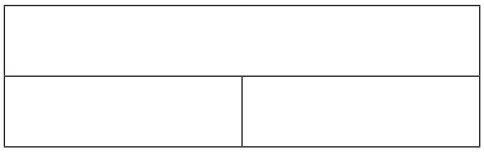
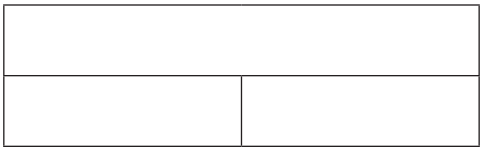
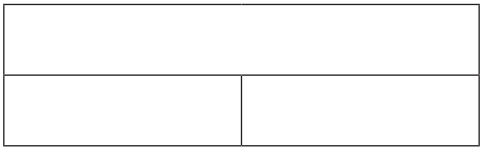
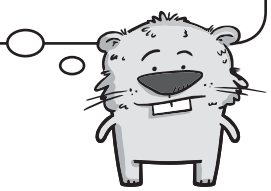
Partner A _____

Partner B _____

Compare Lengths

 _____ − _____ = _____ Difference: _____ cm	 _____ − _____ = _____ Difference: _____ cm
 _____ − _____ = _____ Difference: _____ cm	 _____ − _____ = _____ Difference: _____ cm
 _____ − _____ = _____ Difference: _____ cm	 _____ − _____ = _____ Difference: _____ cm

I can subtract the lesser number from the greater number to find the difference.



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